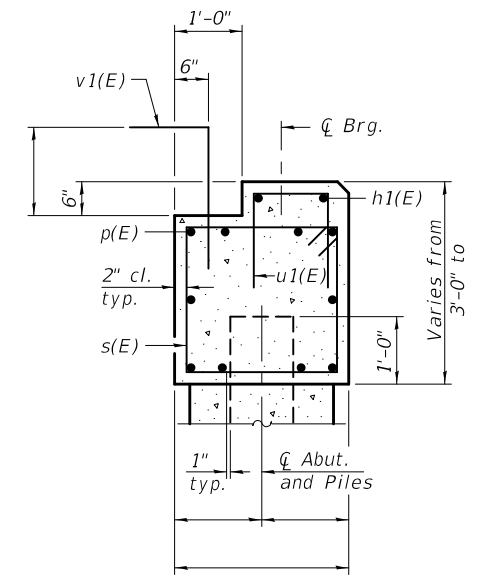


CELL / MODEL NAME	DESCRIPTION	DATE
AD-11-0	Abutments for 11 inch deck beams	2/17/2017
AD-11-L	Abutments for 11 inch deck beams	2/17/2017
AD-11-R	Abutments for 11 inch deck beams	2/17/2017
AD-1721-0	Abutments for 17" or 21" deck beams	2/17/2017
AD-1721-L	Abutments for 17" or 21" deck beams	2/17/2017
AD-1721-R	Abutments for 17" or 21" deck beams	2/17/2017
AD-2742-0	Abutments for 27", 33", or 42" deck beams, no skew	2/17/2017
AD-2742-L	Abutments for 27", 33", or 42" deck beams, left skew	2/17/2017
AD-2742-R	Abutments for 27", 33", or 42" deck beams, ahead right skew	2/17/2017

The diagram is a detailed elevation view of a bridge structure, likely a girder bridge, showing various components and reinforcement details. The structure is divided into several sections:

- Left Section (Abutment):** Features a sloped top surface and a vertical wall. Labels include "Elev." for elevation, "Mandatory const. joint" for a mandatory construction joint, and "2'-6\"

[illegible]

The diagram shows a cross-section of a beam with a width of 16 inches. A dashed line labeled "Cut Line" is drawn across the section. Above the cut line, there are two vertical lines representing reinforcement bars, with the text "-#5 v(E) bars" written above them. The diagram is labeled "Figure 10.10.10" at the bottom.

Diagram of a U-shaped bar. The vertical height of the left leg is labeled  $\frac{u(E)}{u1(E)}$ . The horizontal width of the bottom leg is labeled  $\frac{u(E)}{u1(E)}$ .

$$\underline{BAR \vee 1(E)}$$

Bar	No.	Size	Length	Shape
h(E)		#		_____
h1(E)	2	#4		_____
p(E)	10	#		_____
s(E)		#		□
u(E)	8	#6		≡
u1(E)		#4		≡
v(E)		#5		_____
v1(E)		#5		└
Structure Excavation			Cu. Yd.	
Concrete Structures			Cu. Yd.	
Reinforcement Bars, Epoxy Coated			Pound	
Furnishing - Piles,			Foot	
Driving Piles			Foot	
Test Pile,			Each	
Concrete Encasement			Cu. Yd.	

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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		

erected.

Elev.

Elev.

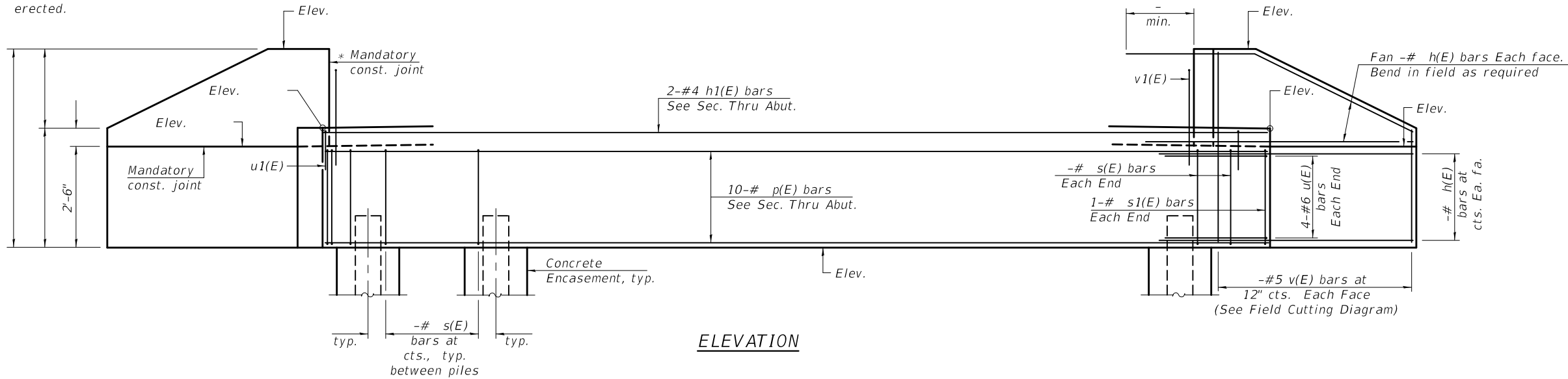
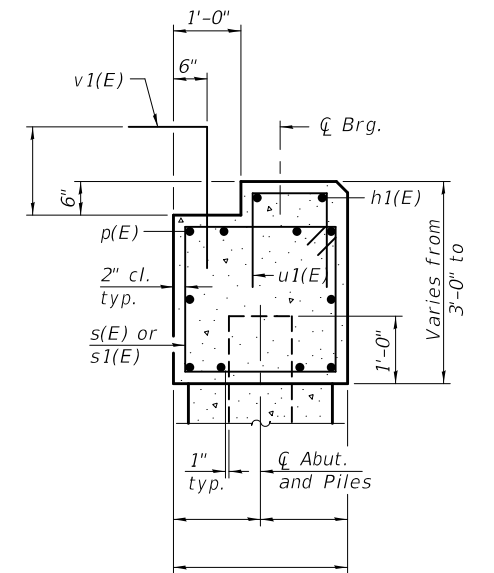
Elev.

2'-6"

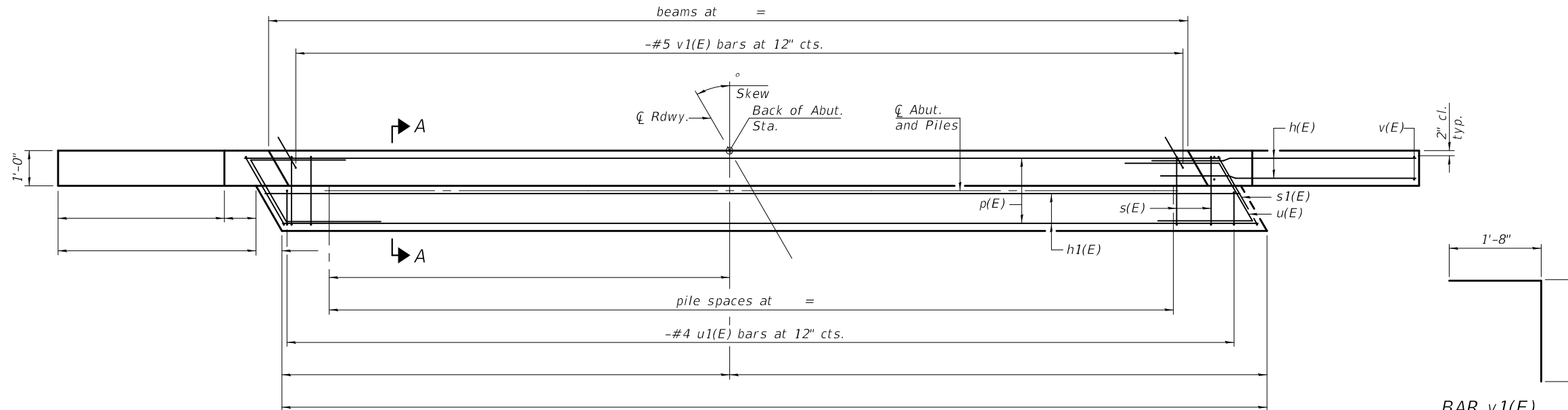
Mandatory const. joint

$u1(E)$

\* Mandatory const. joint

ELEVATION

SECTION A-A  
(Dimensions are at Rt.  $\angle$ 's)



PLAN

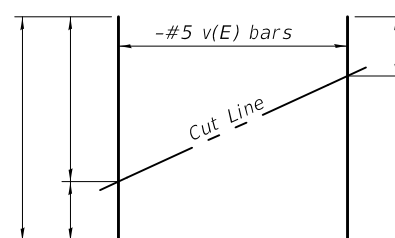
$$\underline{BAR \vee 1(E)}$$
$$\underline{BAR \ u1(E)}$$

BARS  $s(E)$  &  $s_1(E)$

$$\underline{BAR \ u(E)}$$

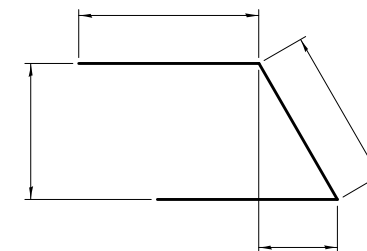
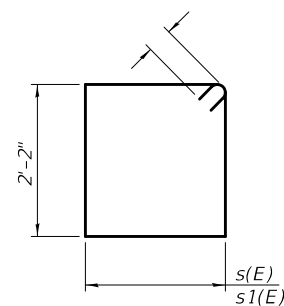
PILE DATA






Type:  
Nominal Required Bearing:  
Factored Resistance Available:  
Est. Length:  
No. Production Piles:  
No. Test Piles:



FIELD CUTTING DIAGRAM

Order  $v(E)$  full length. Cut as shown and use remainder of bars in opposite face.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)		#		_____
h1(E)	2	#4		_____
p(E)	10	#		_____
s(E)		#		
s1(E)		#		
u(E)	8	#6		
u1(E)		#4		
v(E)		#5		_____
v1(E)		#5		
Structure Excavation			Cu. Yd.	
Concrete Structures			Cu. Yd.	
Reinforcement Bars, Epoxy Coated			Pound	
Furnishing - Piles,			Foot	
Driving Piles			Foot	
Test Pile,			Each	
Concrete Encasement			Cu. Yd.	

For details of piles and Concrete Encasement,  
see sheet - of -.

AD-11-L

2-17-2017

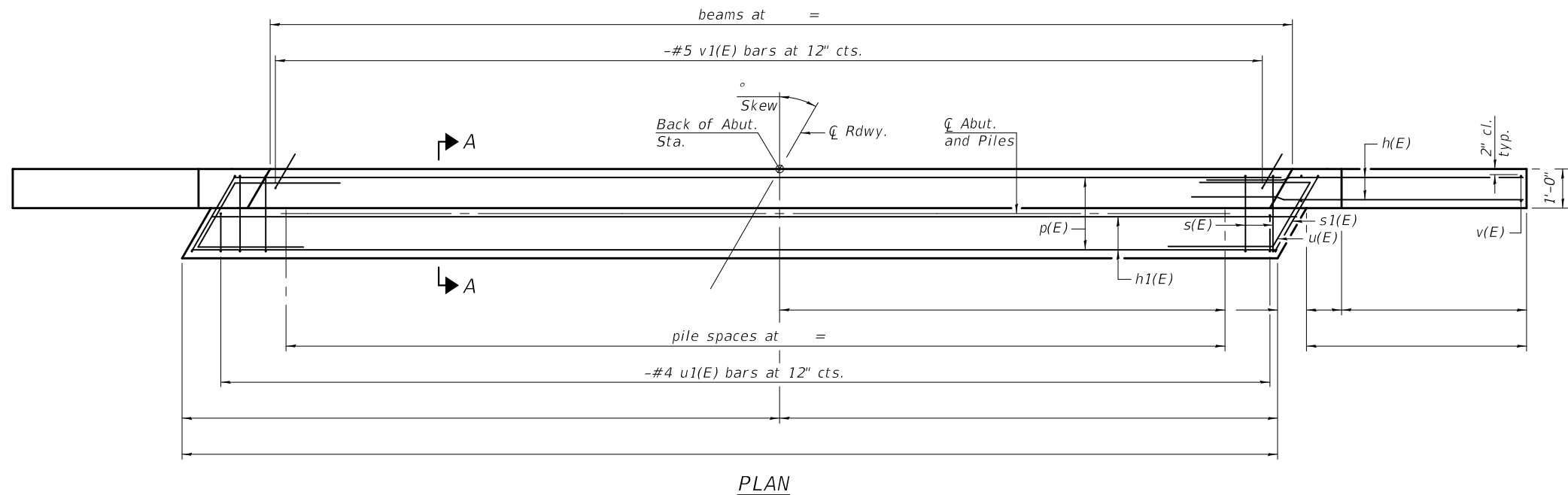
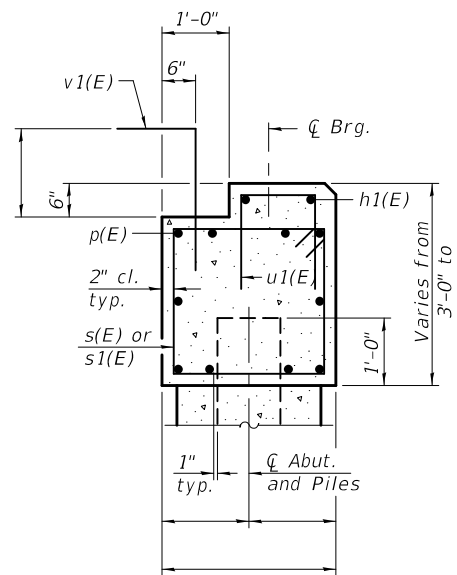
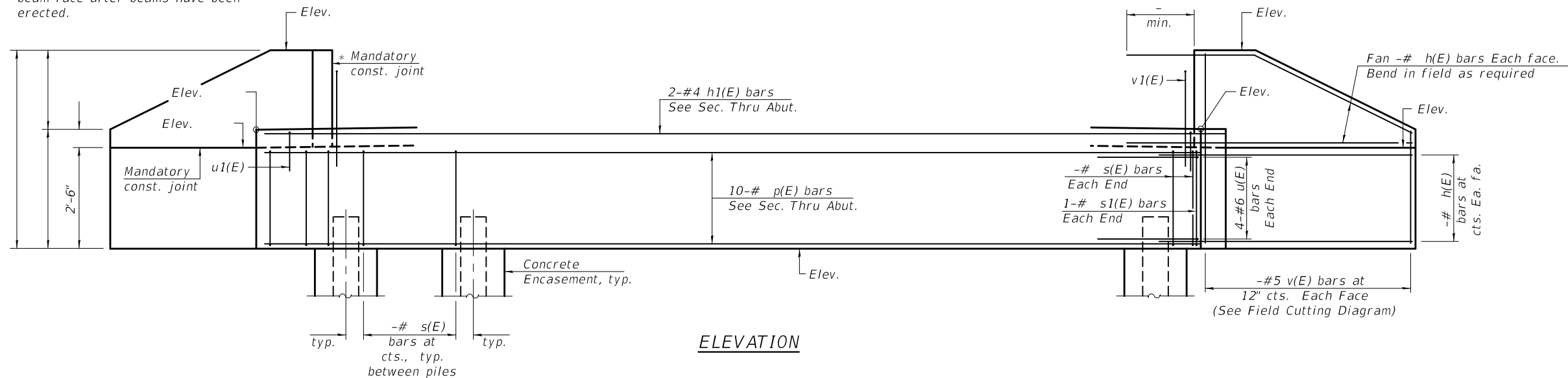
FILE NAME =	USER NAME =	DESIGNED -	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE =	CHECKED -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ABUTMENTS**  
**STRUCTURE NO.**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		

\* Cast top of wingwall flush with exterior beam face after beams have been erected.



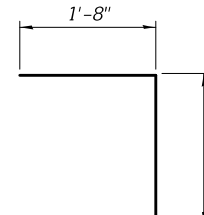
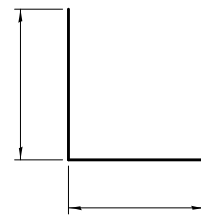
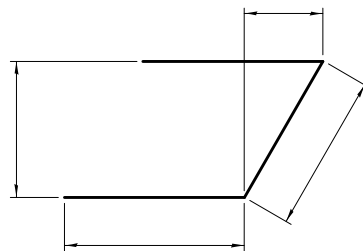
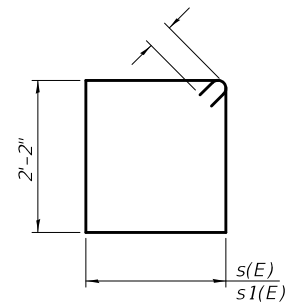
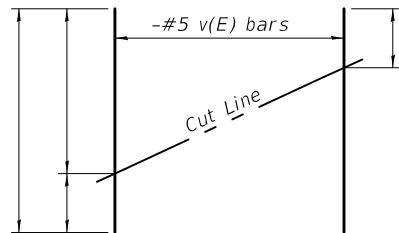
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)		#		
h1(E)	2	#4		
p(E)	10	#		
s(E)		#		
s1(E)		#		
u(E)	8	#6		
u1(E)		#4		
v(E)		#5		
v1(E)		#5		
Structure Excavation			Cu. Yd.	
Concrete Structures			Cu. Yd.	
Reinforcement Bars, Epoxy Coated			Pound	
Furnishing - Piles,			Foot	
Driving Piles			Foot	
Test Pile,			Each	
Concrete Encasement			Cu. Yd.	

For details of piles and Concrete Encasement, see sheet - of -.

**PILE DATA**

Type:  
Nominal Required Bearing:  
Factored Resistance Available:  
Est. Length:  
No. Production Piles:  
No. Test Piles:

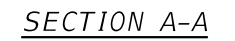


AD-11-R

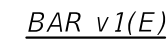
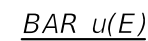
2-17-2017

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The diagram is a technical elevation drawing of a building section. It features a sloped roof on the left side and a vertical wall on the right. A horizontal line across the middle of the wall is labeled 'Mandatory const. joint'. The roof slope is labeled 'Elev.' and the vertical wall is also labeled 'Elev.'. A dimension line on the left indicates a height of '3'-0"'. The drawing is a black and white line drawing with no shading.



Type:  
Nominal Required Bearing:  
Factored Resistance Available:  
Est. Length:  
No. Production Piles:  
No. Test Piles:


$$\underline{BAR \ s(E)}$$


Bar	No.	Size	Length	Shape
h(E)		#		————
p(E)	10	#		————
s(E)		#		□
u(E)	8	#6		⌋
v(E)		#5		————
w(E)		#5		┐
Structure Excavation			Cu. Yd.	
Concrete Structures			Cu. Yd.	
Reinforcement Bars, Epoxy Coated			Pound	
Furnishing - Piles,			Foot	
Driving Piles			Foot	
Test Pile,			Each	
Concrete Encasement			Cu. Yd.	

AD-1721-0

2-17-2017

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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**ABUTMENTS**  
**STRUCTURE NO.**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CONTRACT NO.		
ILLINOIS FED. AID PROJECT				

erected.

Elev.

3'-0"

Elev.

\* Mandatory const. joint

Mandatory const. joint

10-# p(E) bars  
See Sec. Thru Abut.

Concrete Encasement, typ.

Elev.

Min.

Elev.

Fan -# h(E) bars Each face.  
Bend in field as required

v1(E)

Elev.

-# s(E) bars  
Each End

1-# s1(E) bars  
Each End

4-# 6 u(E) bars  
Each End

-# h(E) bars at  
cts. Ea. fa.

-# 5 v(E) bars at  
12" cts. Each Face  
(See Field Cutting Diagram)

typ.

-# s(E) bars at  
cts., typ.  
between piles

typ.

ELEVATION

The diagram illustrates a typical pile cap cross-section. Key dimensions and features include:

- Top Reinforcement:** Labeled  $v1(E)$  with a horizontal dimension of 6" from the left edge.
- Vertical Reinforcement:** Labeled  $\phi$  Brg. (Bridging).
- Internal Dimensions:**
  - Horizontal distance from the left edge to the centerline (cl.) of the pile: 2" cl. typ.
  - Horizontal distance from the centerline of the pile to the right edge: 1'-0"
  - Overall height: Varies from 3'-0" to 3'-6"
- Reinforcement Details:**
  - Top reinforcement bars are labeled  $\rho(E)$ .
  - Bottom reinforcement bars are labeled  $s(E)$  or  $s1(E)$ .
  - Reinforcement is shown as a grid of bars within the cap.
- Bottom Reinforcement:** Labeled  $\phi$  Abut. and Piles, with a horizontal dimension of 1" typ. from the centerline.

beams at =

#5 v1(E) bars at 12" cts.

Skew

Back of Abut. Sta.

Cl Abut. and Piles

h(E)

v(E)

s1(E)

u(E)





p(E)

s(E)

pile spaces at =

2" cl. typ.

A-A

Bar	No.	Size	Length	Shape
h(E)		#		_____
p(E)	10	#		_____
s(E)		#		
s1(E)		#		
u(E)	8	#6		
v(E)		#5		_____
v1(E)		#5		
Structure Excavation			Cu. Yd.	
Concrete Structures			Cu. Yd.	
Reinforcement Bars, Epoxy Coated			Pound	
Furnishing - Piles,			Foot	
Driving Piles			Foot	
Test Pile,			Each	
Concrete Encasement			Cu. Yd.	

Type:  
Nominal Required Bearing:  
Factored Resistance Available:  
Est. Length:  
No. Production Piles:  
No. Test Piles:

The diagram shows a cross-section of a beam with a width of 12 inches. A horizontal line represents the cut line, which is located 5 inches from the top of the beam. The distance from the cut line to the top of the beam is labeled as  $-5 \text{ } v(E) \text{ bars}$ . The cut line is labeled "Cut Line".

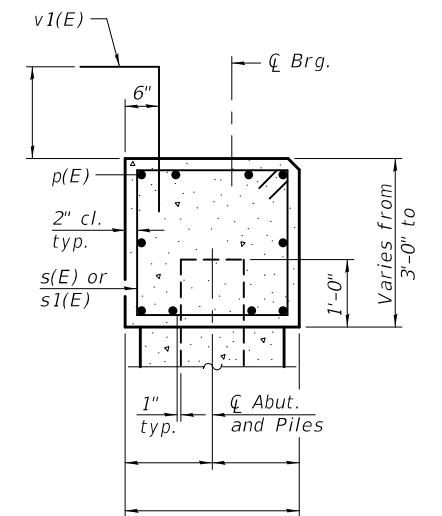
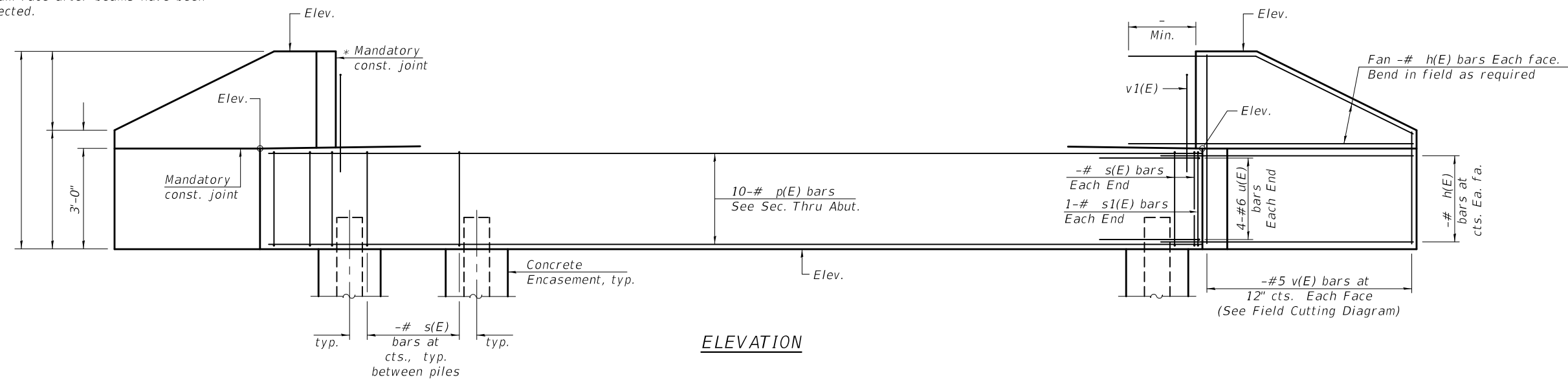
Figure 1 shows a square element with side length  $2-c'$ . The bottom-left corner is cut off by a quarter-circle with radius  $s(E)$ . The remaining corner is a quarter-circle with radius  $s_1(E)$ .

A diagram of a stepped profile. It consists of a horizontal top edge, a vertical right edge, and a horizontal bottom edge. The top edge is divided into two segments by a vertical line. The bottom edge is also divided into two segments by a vertical line. Dimension lines indicate the following measurements: the total width of the top edge, the width of the first segment of the top edge, the total height of the profile, the height of the first segment of the top edge, the width of the second segment of the top edge, and the width of the second segment of the bottom edge.

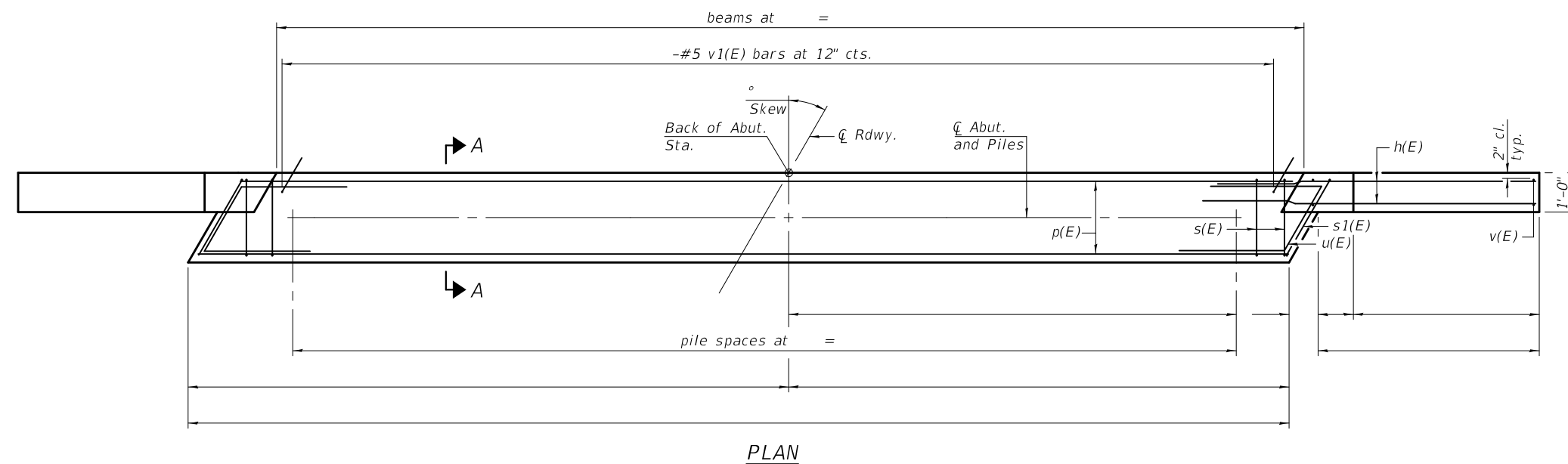
Diagram of a T-joint showing a horizontal pipe with a vertical pipe attached. The horizontal pipe has a diameter of 1'-8".

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		CHECKED -	REVISED -							
	PLOT SCALE =	DRAWN -	REVISED -							
	PLOT DATE =	CHECKED -	REVISED -							
						CONTRACT NO.				
ILLINOIS FED. AID PROJECT										

\* Cast top of wingwall flush with exterior beam face after beams have been erected.



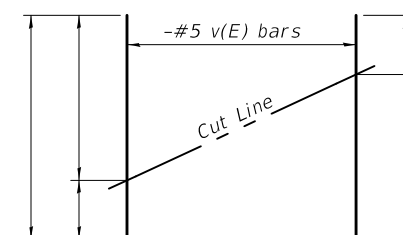
SECTION A-A  
(Dimensions are at Rt. L's)



### PLAN

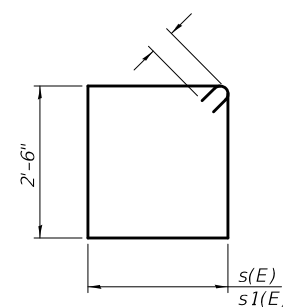
PILE DATA

Type:  
Nominal Required Bearing:  
Factored Resistance Available:  
Est. Length:  
No. Production Piles:  
No. Test Piles:

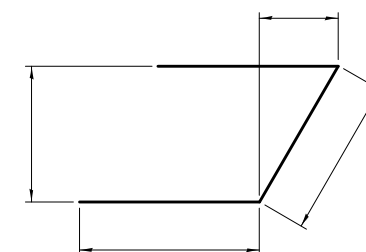
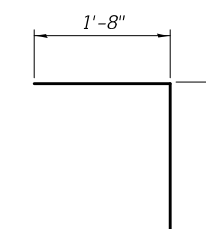






FIELD CUTTING DIAGRAM

Order  $v(E)$  full length. Cut as shown and use remainder of bars in opposite face.



BARS  $s(E)$  &  $s1(E)$

BAR  $u(E)$ 
$$\underline{BAR \vee 1(E)}$$
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)		#		————
p(E)	10	#		————
s(E)		#		
s1(E)		#		
u(E)	8	#6		
v(E)		#5		————
v1(E)		#5		
Structure Excavation			Cu. Yd.	
Concrete Structures			Cu. Yd.	
Reinforcement Bars, Epoxy Coated			Pound	
Furnishing - Piles,			Foot	
Driving Piles			Foot	
Test Pile,			Each	
Concrete Encasement			Cu. Yd.	

For details of piles and Concrete Encasement,  
see sheet - of - .

AD-1721-R

2-17-2017

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		CHECKED -	REVISED -							
	PLOT SCALE =	DRAWN -	REVISED -							
	PLOT DATE =	CHECKED -	REVISED -							
						CONTRACT NO.				
TITL INOTS FFD. AID PROJCT										

erected.

Elev.

\* Mandatory const. joint

Elev.

3'-0"

Mandatory const. joint

-#5 h1(E) bars  
See Sec. Thru Abut.

10-# p(E) bars  
See Sec. Thru Abut.

Concrete Encasement, typ.

Elev.

-# s(E) bars at cts., typ.

min.

Elev.

Fan -# h(E) bars  
Bend in field as

v1(E)

v2(E)

Elev.

-# s(E) bars  
Each end

4-#6 u(E) bars  
Each end

-# h(E) bars at cts. Fa. fa.

-#5 v(E) bars at 12" cts. Each face  
(See Field Cutting Diagram)

ELEVATION

Diagram illustrating the cross-section of a bridge pier and abutment structure. Key dimensions and components are labeled:

- Pier Dimensions:**
  - Top width: 1'-0"
  - Top section width: 6"
  - Base width: 1'-0"
  - Height: 3'-0" (Varies from 3'-0" to 3'-0")
- Reinforcement Details:**
  - Vertical bars:  $v1(E)$ ,  $v2(E)$
  - Horizontal bars:  $h1(E)$
  - Clear layer: 2" cl. typ.
  - Reinforcement spacing:  $s(E)$
- Structural Features:**
  - Bridge Pier:  $\phi$  Brg.
  - Abutment:  $\phi$  Abut. and Piles

beams at =

-#5 v1(E) bars at 12" cts.

-#5 v2(E) bars at 12" cts. Each face

Section A-A

Back of . Abut. Sta.

Cl Abut. and Piles

h1(E)

h(E)

v(E)

2" cl. typ.

p(E)

s(E)

u(E)

pile spaces at =

The diagram shows a cross-section of a beam with a width of 16 inches. A vertical line on the left represents the centerline of the beam. A horizontal line at the top is labeled "16 in". A diagonal line, labeled "Cut Line", starts from the left vertical line and extends towards the right. Above the cut line, there is a horizontal dimension line labeled "-#5 v(E) bars". The diagram illustrates the location of the cut line relative to the beam's width and the reinforcement bars.

Diagram of a T-junction showing a horizontal pipe with a vertical branch. The horizontal pipe has a diameter of 1'-8".

Bar	No.	Size	Length	Shape
h(E)		#		=====
h1(E)		#5		=====
p(E)	10	#		=====
s(E)		#		□
u(E)	8	#6		U
v(E)		#5		=====
v1(E)		#5		┐
v2(E)		#5		=====
Structure Excavation			Cu. Yd.	
Concrete Structures			Cu. Yd.	
Reinforcement Bars,			Pound	
Epoxy Coated				
Furnishing - Piles,			Foot	
Driving Piles			Foot	
Test Pile,			Each	
Concrete Encasement			Cu. Yd.	

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		CHECKED -	REVISED -								
	PLOT SCALE =	DRAWN -	REVISED -			CONTRACT NO.					
	PLOT DATE =	CHECKED -	REVISED -								
	ILLINOIS FED. AID PROJECT										



erected.

Elev.

\* Mandatory const. joint

Elev.





0"

Mandatory const. joint



Type:  
Nominal Required Bearing:  
Factored Resistance Available:  
Est. Length:  
No. Production Piles:  
No. Test Piles:

BARS  $s(E)$  &  $s1(E)$ 

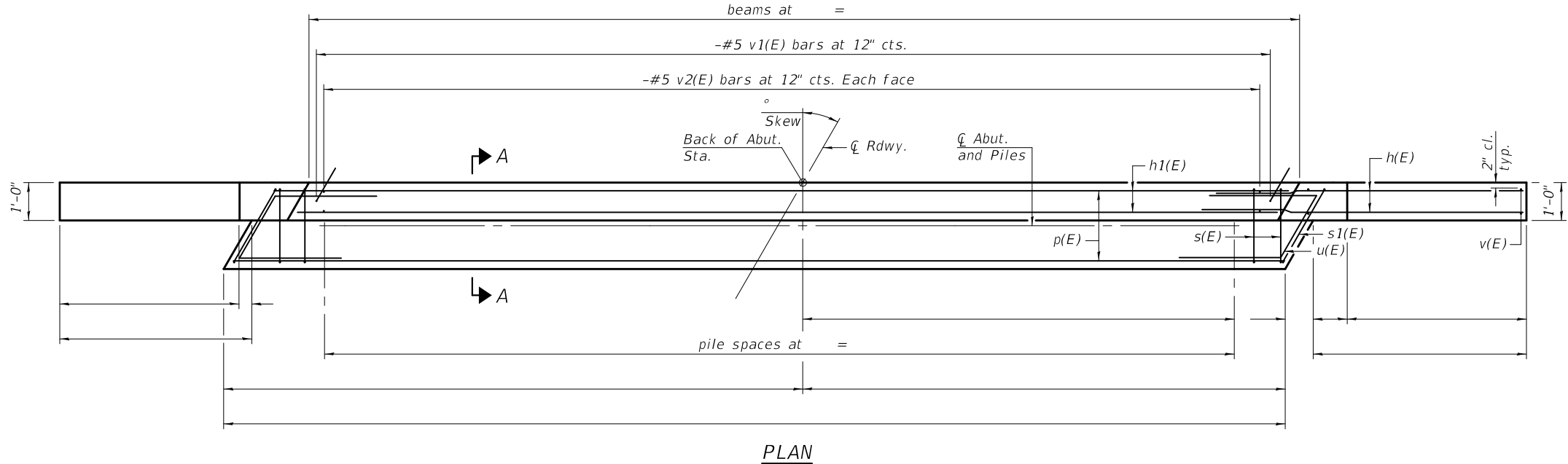
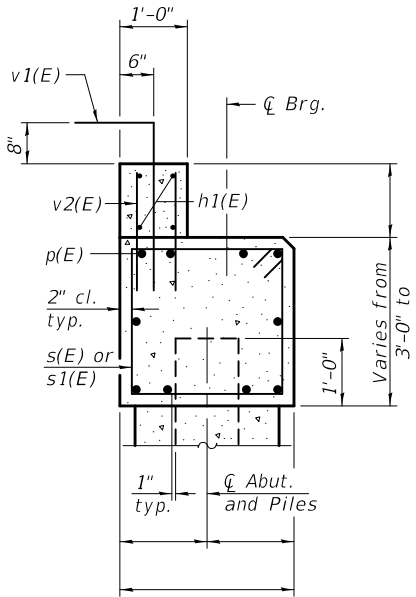
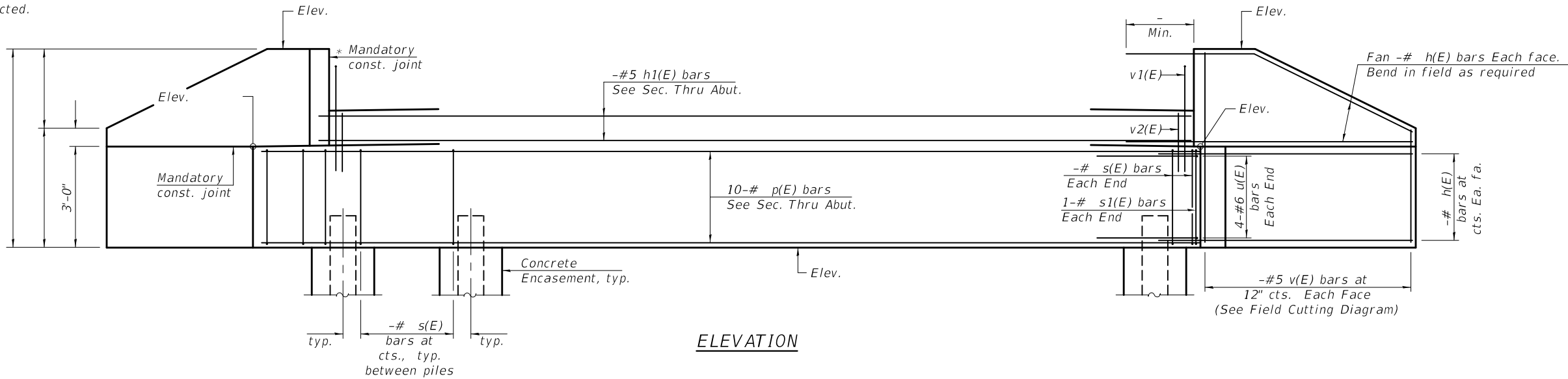
Bar	No.	Size	Length	Shape
h(E)		#		_____
h1(E)		#5		_____
p(E)	10	#		_____
s(E)		#		
s1(E)		#		
u(E)	8	#6		
v(E)		#5		_____
v1(E)		#5		
v2(E)		#5		_____
Structure Excavation			Cu. Yd.	
Concrete Structures			Cu. Yd.	
Reinforcement Bars,			Pound	
Epoxy Coated				
Furnishing - Piles,			Foot	
Driving Piles			Foot	
Test Pile,			Each	
Concrete Encasement			Cu. Yd.	

AD-2742-L

2-17-2017

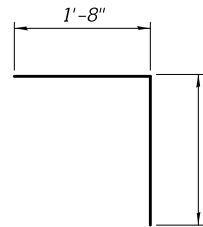
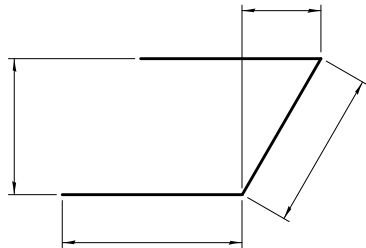
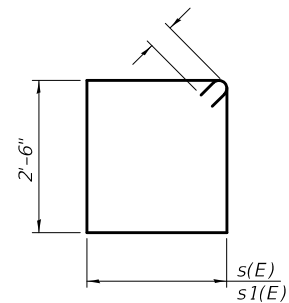
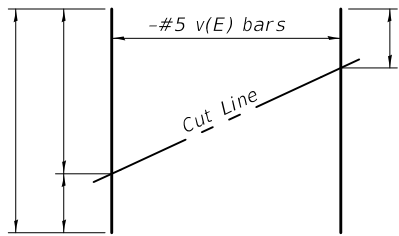
FILE NAME =	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ABUTMENTS STRUCTURE NO.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED -	REVISED -							
	PLOT SCALE =	DRAWN -	REVISED -							
	PLOT DATE =	CHECKED -	REVISED -							
						CONTRACT NO.				
					ILLINOIS FED. AID PROJECT					

\* Cast top of wingwall flush with exterior beam face after beams have been erected.



**PILE DATA**

Type:  
Nominal Required Bearing:  
Factored Resistance Available:  
Est. Length:  
No. Production Piles:  
No. Test Piles:



**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)		#		
h1(E)		#5		
p(E)	10	#		
s(E)		#		
s1(E)		#		
u(E)	8	#6		
v(E)		#5		
v1(E)		#5		
v2(E)		#5		
Structure Excavation			Cu. Yd.	
Concrete Structures			Cu. Yd.	
Reinforcement Bars, Epoxy Coated			Pound	
Furnishing - Piles,			Foot	
Driving Piles			Foot	
Test Pile,			Each	
Concrete Encasement			Cu. Yd.	

Notes:  
For details of piles and Concrete Encasement, see sheet - of -.  
Cast backwall after beams and concrete wearing surface, if applicable, have been erected.

AD-2742-R

2-17-2017

FILE NAME =	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ABUTMENTS STRUCTURE NO.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED -	REVISED -							
	PLOT SCALE =	DRAWN -	REVISED -					CONTRACT NO.		
	PLOT DATE =	CHECKED -	REVISED -					ILLINOIS FED. AID PROJECT		